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Contact: Nancy Finley
Cape Cod National Seashore, Wellfleet, Mass.
(Phone: 508-349-3785 ext. 216)

PRESS RELEASE

NATIONAL PARKS BECOME AN OUTDOOR CLASSROOM ON THE ENVIRONMENT

In a program that peaks with the fall leaves around Earth Science Week, October 12-18, students and teachers are using satellite data to determine how the environment in National Parks are changing over time.

This fall, some teachers and students are having class on the ground in Massachusetts, collecting data on vegetation, soils, sands, water and various environments at the Cape Cod National Seashore (CCNS). The CCNS is a prototype park designed to educate children and adults. The National Park Service and teachers hope the idea will spread to other national parks,

This project was funded by the National Park Foundation, the U.S. National Park Service, and Pacific Gas and Electric. Satellite data is being used to assess how ecosystems are changing, and this program echoes its applications in coastal management.

NPS and other partners developed an educational curriculum to identify global, regional and local environmental changes over space and time.

This is the second year of a 3-year project focusing on 4 major ecosystems: beaches and dunes, salt marshes/estuaries, uplands (lands away from the ocean, not influenced by tides), and freshwater systems. The water studies include groundwater hydrology as well as surface waters such as ponds, wetlands, and streams. Students are using satellite pictures to examine these and other areas before and after they collect data from the National Seashore.

Barbara Dougan, an Education Specialist at the Cape Cod National Seashore has found satellite data extremely useful not only to examine the changing ecosystems but for other park programs. Satellite images can date back over 30 years and they cover large areas all at once.

With the use of satellite imagery, the study will help determine how Cape Cod has changed and is changing over time due to natural and human processes. Landsat satellite data provides records of land use and land cover back to the mid-1970s, and newer technologies on board other satellites provide views of vegetation and bodies of water. Students are also using buoys from the National

Oceanic and Atmospheric Administration (NOAA), digital cameras on the ground and on-board remote controlled airplanes and small aircraft, and hand-held Alta Spectrometers. These instruments read reflected light from plants. By measuring changes in the reflected light, students can evaluate the plant's health response to factors such as sand, salt, temps, and water quality.

The project will expand as teachers establish study sites in their own individual communities. The future plan of the project includes participation from other National Parks, and in the final phase all findings will be posted for public use on the Internet.

In addition to NPS, other partners who participated in the teacher workshops held this summer to develop lesson plans include the U.S. Geological Survey, the Boston Museum of Science, Audubon and the U.S. Fish and Wildlife Service.

Professional guidance was provided by the Massachusetts Marine Educators Association of 4,000 teachers to make sure national learning standards are incorporated into the teacher lesson plans. The lesson plans will also extend to classes outside the current group. The National Park Service is delivering this project to the 9,000 students in the initial stages of this project.

For the Cape Cod National Seashore website on the Internet, visit:

<http://www.nps.gov/caco/index.htm>

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